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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/611,402	06/30/2003	Winefred Washington	013628.00499 (02CXT0078D)	1911
77339 7590 07/20/2010 JACKSON WALKER (CONEXANT) 901 MAIN STREET, SUITE 6000 DALLAS, TX 75202			EXAMINER JACKSON, JENISE E	
			ART UNIT 2439	PAPER NUMBER
			MAIL DATE 07/20/2010	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/611,402	<b>Applicant(s)</b> WASHINGTON, WINEFRED	
	<b>Examiner</b> JENISE E. JACKSON	<b>Art Unit</b> 2439	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-15 and 17-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-15, 17-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1-5, 7-15, 17-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Halpern(2006/0239453) in view of Lyle(2008/0046728) and further in view of Piasecki et al(2005/0204224).

3. As per claim 1, Halpern discloses a data buffer [0063]; an input/output register that interfaces with memory of the digital device [0050], and a memory controller that directs digital data from the memory to the data buffer with the digital data passing thorough the encryption key generator prior to entering the input/output register[0063], wherein the data buffer, input/output register and the memory controller are contained within an enclosed digital device[0050, 0063]. Halpern discloses the encryption key generator is between the register and the data buffer[0050, 0063].

4. Halpern is silent on an integrated encryption key generator generating at least one key based on input received from an inaccurate timing source, Halpern is silent on the integrated encryption key generator is enclosed within the digital device. Lyle discloses integrated encryption key generator generating at least one key based on input received from an inaccurate (i.e. R-C oscillator affected by temperature, voltage, noise or other physical forces)[0132] timing

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source(i.e. R-C oscillator), and Lyle discloses the integrated encryption key generator is enclosed within the digital device(i.e. transmitter)[0020, 0055].

5. It would have been obvious to one of ordinary skill in the art at the time of the invention to include an integrated encryption key generator generating at least one key based on input received from an inaccurate timing source of Lyle with Halpern, the motivation is that generating at least one key based on input received from an inaccurate timing source insures that a key that is generated by using this method is difficult or impossible for an attacker to place the transmitter in the same initial state, because the key is based on an inaccurate clock, that can be inaccurate due to temperature or voltage or noise, or other physical forces[0132 of Lyle].

6. Halpern nor Lyle disclose a control pad coupled to the input/output register; and formed on a single substrate and are accessed through the control pad. Piasecki discloses a control pad coupled to the input/output register; and formed on a single substrate and are accessed through the control pad[0007, 0012, 0014-0015]. It would have been obvious to one of ordinary skill in the art to include a control pad coupled to the input/output register, and formed on a single substrate and are access through the control pad of Piasecki with the Halpern-Lyle combination, the contact pad is utilized for input or output of digital signals, and when the logic is at high allows digital signals to be passed from the contact pad to the microprocessor[0030 of Piasecki], thus incorporating Piasecki's control pad onto a single substrate with the components of Halpern-Lyle combination insures the control pad of Piasecki can work together, to pass the digital data from the control pad to the microprocessor.

7. Same Motivation as above. As per claim 2, Halpern discloses a key store[0045] and a linear feedback shift register[0014]generates a pseudorandom bit pattern while the linear

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feedback shift register is enabled and stores a plurality of bits as at least one key in the key store[0014, 0063]. Halpern is silent on an inaccurate clock. Lyle discloses an inaccurate clock[0132].

8. As per claim 3, Halpern discloses where the encryption key generator further includes a random number generator that receives the pseudorandom bit pattern from the linear feedback shift register and provides a random number for use by the digital device[0039, 0050].

9. As per claim 4, Halpern discloses pseudorandom bit pattern that creates a bit stream; and a key store that stores portions of pseudorandom bit pattern as the at least one keys[0050, 0063].

10. As per claim 5, Halpern discloses including a pseudo random number generator that selects a portion of the pseudorandom bit pattern to be random number[0052].

11. As per claim 7, Halpern discloses a subkey that creates a sub-key based on data from the memory controller and a selected key from the key store; and a combiner that combines the sub-key with the digital data[0069].

12. As per claim 8, Halpern discloses a data mixer that mixes the bits of a byte of digital data; and a combiner that combines the byte of the digital data prior to the byte being combined with the sub-key[0062, 0069].

13. Same Motivation as claim 1. As per claims 9, 22, Halpern discloses a memory controller that generates a memory request to retrieve the encrypted digital data; and encryption circuit that decrypts the encrypted digital data in response to the memory request of the memory controller using one key[0045-0046], and generating a plurality of keys for encrypting digital data[0022, 0045, 0063]. Halpern is silent on decrypt encrypted digital data stored in memory of a digital device, an encryption key generator receiving a signal from an inaccurate clock. Lyle discloses

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decrypt encrypted digital data stored in memory of a digital device, and encryption key generator receiving a signal from an inaccurate clock [0055, 0022, 0026, 0132].

14. As per claim 10, Halpern discloses a combiner that combines one of the plurality of keys with a bank and row information contained in the memory request resulting in a sub-key[0062, 0069].

15. As per claim 11, Halpern discloses a data mixer that unmixes bits within a byte after the sub-key is applied to encrypted digital data[0062, 0069].

16. As per claim 12, Halpern discloses generating a plurality of keys, storing the plurality of keys, placing the digital data in a data buffer; and encrypting the digital data using the at least one key while the digital data is being placed in a rewritable memory[0022, 0045, 0063, see claim 1 page 5]. Halpern is silent on disclosing generating of an inaccurate clock. Lyle discloses generating a key based on an inaccurate clock signal[0132].

17. Same Motivation as claim 1. As per claim 13, Halpern discloses creating a pseudorandom bit pattern, and storing at least one portion of the pseudorandom bit pattern in a key store as the plurality of keys[0052, see pg. 5]. Halpern is silent on disclosing generating of an inaccurate clock. Lyle discloses generating a key based on an inaccurate clock signal[0132].

17. As per claim 14, Halpern discloses where the pseudorandom bit pattern is generated by a linear feedback shift register[0064].

18. As per claims 15, 21, Halpern discloses generating a random number from the pseudorandom bit pattern[0039, 0050].

19. As per claim 17, Halpern discloses selecting a portion of the pseudorandom bit pattern to be used a random number[0050].

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20. As per claim 18, Halpern discloses mixing the bits of a byte of the digital data with a data and combining the byte with the plurality of keys[0062, 0069, see pg. 5 claim 1].

21. As per claim 19, Halpern discloses generating a sub-key with data from the memory controller and the key; and combining the sub-key with the digital data[0069].

22. As per claim 20, Halpern discloses mixing the bits of byte of digital data with a data mixer; and combining the byte with the sub-key[0050].

23. As per claim 23, Halpern discloses combining the plurality of keys with a bank and row information contained in the memory request to generate a sub-key[0062, 0069, see pg. 5 claim 1].

24. As per claim 24, Halpern discloses unmixing a byte of encrypted digital data with a data mixer[0069].

25. As per claim 25, Halpern discloses an encryption circuit with at least one key, a data buffer filled with the digital data[0022, 0045, 0063], a memory controller that directs and the storage of digital data in the rewriteable memory with the digital data being encrypted by the encryption circuit and the at least one key after the digital data has entered the data buffer but prior to being stored in the rewritable memory[0063].

26. As per claim 26, Halpern discloses a pseudorandom bit stream generator that creates a pseudorandom bit stream; and a key store that stores the at least one key that is selected from the pseudorandom bit stream[0052].

27. As per claims 27, Halpern discloses a data mixer mixes the bits of a byte of the digital data; and a combiner that combines the byte with the key[0050].

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28. As per claims 28, Halpern discloses wherein the memory controller that directs digital data from the memory to the data buffer with the digital data passing through the encryption key generator prior to entering the input/output register comprises means for encrypting the digital data prior to entering the input/output register[0063].

***Response to Amendments and Applicant***

29. A non-final rejection was mailed out on 2/3/10 in which claims 1-5, 7-15, 17-28 were rejected. The Applicant responded on 5/3/10 in which claims 1, 12-13, 18, 22-23 were amended by the Applicant.

30. The Applicant discloses that Halpern and Lyle does not disclose an integrated encryption key generator, data buffer, input/output register, control pad and memory controller that are formed on a single substrate and are accessed through a control pad. The Applicant is arguing amended features, and thus new art has been applied to meet the limitations of a control pad(see above for analysis).

31. The Applicant states that Halpern nor Lyle disclose a memory controller. Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

32. The Applicant states that Lyle does not disclose generating a plurality of keys based on input received from an inaccurate clock. The Examiner did not state that Lyle disclosed a plurality of keys. The Examiner stated previously that one key is based upon input received from an inaccurate clock[0022, 0026, 0055, 0132]. The Examiner stated in the previous office



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action, that Halpern discloses generating a plurality of keys[see pg. 5]. Therefore, the Applicant's remark is moot.

33. The Applicant states that Halpern does not disclose encrypting the digital data prior to entering the input/output register. The Examiner disagrees with the Applicant. Halpern discloses the calling station may immediately begin with sending its own data in encrypted form which the receiving server station would place into a comparator register[0069].

***Final Necessitated by Amendment***

34. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JENISE E. JACKSON whose telephone number is (571)272-

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3791. The examiner can normally be reached on Increased Flex time, but generally in the office M-Fri(8-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on (571) 272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

July 15, 2010

/J. E. J./

Examiner, Art Unit 2439

/Edan Orgad/

Supervisory Patent Examiner, Art Unit 2439